The

Physicians and Surgeons' Investigator.

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To The Investigator Publishing Co.:

GENTLEMEN : I herewith tender my resignation as Editor-in-chief.

Very truly yours,

F. PARK. LEWIS.

The present number of the INVESTIGATOR witnesses the transfer of the editorial department into new hands. Dr. Frank Park. Lewis, under whose efficient management this part of the journal's work has been conducted, has long felt the pressure of other duties more intimately connected with his line of study, and now deems his resignation a matter of necessity. The journal is led to hope, however, that from time to time its pages will be graced by contributions from his pen. As for the future of the editorial department we can only say that our strongest efforts will be exerted towards making the INVESTIGATOR a critical review of all that pertains to medical progress.

SMALL-POX.

The appearance of small-pox in the city of Buffalo during the past six weeks has been the cause of no little alarm to our citizens, on account of the crowded and unsanitary condition of the district in which it first broke out. The section referred to is occupied almost entirely by Polanders, whose mode of living is well calculated to further the spread of infectious disease. With from fifteen to

thirty people huddled together in a few rooms, in cellarless houses, closely adjoining each other, and on streets that are unpaved and open to all sorts of household refuse, it would seem that the requirements of almost any contagious disease, so far as suitable soil is concerned, would be satisfied. Add to this the unwholesome, and oftentimes impure, diet of which they partake, and it seems strange indeed that small-pox has not assumed the proportions of an epidemic right in our midst. The reasons why it has not done so, and why there need be little fear in future, we think, are two: first, the prompt and systematic measures that have been carried out by the health physician and his corps of assistants, whereby all existing cases have been immediately transferred to the quarantine hospital, the houses, bedding and clothing thoroughly fumigated or destroyed, and all remaining occupants subjected to vaccination and close confinement under police vigilance; second, the compulsory vaccination of every individual in the infected locality, which represents a population of over twenty thousand. Underlying all this is a fact known only to those who have been working zealously in our behalf, and to which much of our immunity from an epidemic is doubtless due, *i. e.*, the fact that in this comparatively new element of our population the evidences of recent vaccination, either on shipboard or shortly before leaving home, are very pronounced.

Although isolated cases have appeared in other quarters of the city, their speedy removal and the enforcement of rigid precautions against further spread, have resulted most happily; for in no instance, as yet, has the disease manifested itself in more than two houses in the same neighborhood. The prevalent idea, that to be sent to the quarantine hospital entails all manner of neglect and uncleanly surroundings, derives more of its repulsive significance from being associated in the popular mind with that disgusting synonym "Pest House," than from any neglect or uncleanliness that actually exists. A physician is in constant attendance, everything is

kept scrupulously clean, and all needs of the patients are as carefully attended to as in their own homes. The death rate has been small, and everything points to a speedy extermination of the disease.

CHRONIC HYPERSECRETION OF GASTRIC JUICE AND ITS TREATMENT.

The hypersecretion of gastric juice, regarded by Riegel as a purely functional disorder, in which this fluid is continually poured out, even into an empty stomach and without the normal stimulus of ingestion, seems to differ but little from hyperacidity. The belief of most writers on this subject is that hypersecretion is of quite rare occurrence, although they admit the frequent existence of hyperacidity. It appears to us to be a distinction without a difference. While some patients suffering from hypersecretion become emaciated and anæmic, others continue for years without manifesting marked malnutrition. The only positive indication of chronic hypersecretion is dilatation of the stomach. An examination of the undiluted contents of the stomach several hours after a test-meal is held to materially facilitate its diagnosis, revealing in the advanced stages of this disorder a marked acid condition and a large proportion of ingested food distinctly divided into two layers, of which the lower is much the thicker, and is composed mostly of undigested starch and a very few flesh fibres. Reigel claims to have found hydrochloric acid far in excess of the normal amount, in some cases as high as six per cent. being detected. He insists, as a requirement for positive diagnosis, upon the withdrawal of some of the contents of the stomach when there is no food in it. This is effected by emptying the stomach at night, and using the stomach tube the following morning. The examination will reveal from five to fifteen ounces of a stringy, sour fluid.

When we come to the symptomatology there is absolutely nothing

definite. Acid emetations, gastralgia, and indigestion are commonly observed, although by no means always present. With regard to appetite, both extremes are noticed, and thirst is often intense.

The treatment recommended for this condition consists of systematic washing of the stomach, Carlsbad waters, and a diet of albumenoid foods, with opium administered in very small doses.

ADMINISTRATION OF MEDICINE IN HOT SOLUTION.

This is a suggestion made some months ago by the *Medical World*, and, to our mind, deserves the hearty co-operation of the medical fraternity in proving or disproving its efficacy. It is an idea with the seeds of plausibility about it, and careful trial in the hands of a large number of medical men will do much to settle its claim of precedence over the more common method of administering drugs. The idea was first called up in connection with the giving of morphine in hot solution instead of by means of the hypodermic syringe when a speedy effect is desired, but its field of application has seemed broad enough to entitle it to a foremost place in the administration of all drugs, except where emergencies arise. There can be no doubt that cold water chills the stomach, thereby contracting the vessels, and retarding absorption until it has regained its normal temperature. For this reason, also, cold water should not be taken immediately after the medicine.

—The hypodermic injection of permanganate of potash. two grains to the drachm of water, has been discovered by a Brazilian physician, Dr. Leaoudor, to be an antidote for snake poison. His government has presented him with $15,000 as a bonus for his discovery. Dr. Gaston, of Atlanta, Ga., has used it in this country with success.

CANCER OF THE CÆCUM, WITHOUT INTESTINAL OBSTRUCTION—LAPAROTOMY—DEATH ON THE NINTH DAY.

By H. I. Ostrom, M.D., New York.*

Cancer of the cæcum is not a rare disease, but some features of the following case render it one of uncommon interest.

J.—C.—aged 40, male, a plasterer, was admitted to Hospital August 2, suffering from an abdominal tumor. I examined him the following day. Family history good. Denies syphilis. Temperature 101. Pulse 120. No appetite. Bowels regular. Urine normal. Surface of the body at times cold, covered with sticky perspiration. Constant dull pain in the right side of the adbomen. Palpation discovered a hard smooth tumor lying in the right iliac fossa, having firm adhesion within the pelvis. The tumor extended almost to the median line, anteriorly, and posteriorly was lost in the lumbar muscles. Superiorly it could be clearly defined from the liver. The swelling was quite sensitive to manipulation, especially when an attempt was made to examine its posterior aspect. Deep fluctation was detected a little above the superior spinous process of the ilium, at which point, and indeed over the greater part of its anterior surface, there were adhesions to the abdominal wall. Aspiration at first gave negative results, nothing flowing through the needle. This surprised me, for the needle could be moved freely, as if in a cavity containing fluid. A gush of extremely fetid pus, however, followed the withdrawal of the instrument. The case was one calling for operative interference, and the condition of the man forbade unnecessary delay. Accordingly, with antiseptic precautions I made an incision five inches long directly over the tumor, crossing the point of aspiration. This incision was carried through the two ex-

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ternal muscular layers, but upon reaching the transversalis muscle adhesions so extensive existed as to give the impression that the muscle formed the external tumor wall. This was subsequently found to be the case. By these adhesions the growth was rendered extra peritoneal, and the following manipulations were carried on without opening the abdominal cavity. The tumor was opened to the length of the external wound. The center consisted of masses of broken-down tissue, and pus. These were scooped out to afford a better opportunity for examining the relation of the growth, and to ascertain if removal were practicable. Through the iliac opening, which of course allowed an inspection only from the interior, it was found impossible to accurately define the posterior relation of the neoplasm. I therefore made an exploratory incision in the median line, and was thus enabled to ascertain that the tumor was firmly attached to the iliac fossa and involved the cæcum, colon, and ileum. The appearance of the mass removed, and of that which remained, together with the situation of the neoplasm, left little doubt of its malignant character; a diagnosis obscured before the operation by the absence of symptoms of intestinal obstruction, and by the result of aspiration. It was not considered advisable to attempt any further removal of the tumor, for this would involve resection of the gut, a prolonging of the operation which the patient could not have sustained. I therefore closed the median line wound, and left the iliac wound open, packing it with iodoform gauze. The shock was profound for twenty-four hours, but the patient rallied and for several days was able to take considerable nourishment, seeming cheerful, and free from suffering. He however gradually sank, and died from exhaustion on the ninth day. From the second day of the operation the discharge became very profuse, and at times was decidedly fecal in odor, but his bowels moved regularly and the discharge from the cavity seemed in no way to depend upon their action. At the time of death, the inside of the wound looked

clean, and was filling with healthy granulations. At no time was there any rise of temperature, or other indication of peritonitis.

An examination after death showed a most interesting condition. The neoplasm was found to be, in the parts that remained firm, an epithelioma of the cæcum, which had contracted adhesions to the iliac fossa, and involved the anterior abdominal wall. The principal part of the growth was on the outer side of the cæcum towards the ilium, which was the part opened in the laparotomy, and it was here also that the degeneration and breaking down of tissue chiefly took place. That part of the neoplasm which surrounded the gut remained quite firm, a condition which would not have continued long, considering the evident rate of destruction going on in other parts of the tumor. It is however remarkable that intestinal obstruction had not taken place ; the bowel was completely buried in the neoplastic mass, the ileo-cœcal region being entirely lost within it.

RHEUMATISM.*

By David G. Alling, M.D., Dunkirk, N. Y.

The question presents itself, why is this such a stubborn disease to contend with? Surely our text-books are not wanting in words in which theory after theory is given, as to causation, symptomatology, etiology and treatment ; so minutely in fact that one need only to be told another has rheumatism and the remedy is at hand to conquer the unwelcome visitor. Let us, in passing, look at some of the many definitions, causes and theories of this hydra. One tells us that it is an acute, febrile disease, caused by certain obscure climatic and diathetic influences, characterized by pyrexia, sweats, and acute shifting inflammation of the joints and other structures, with

* Read before Western N. Y. Homœopathic Medical Society.

pathology still obscure. While we learn absolutely nothing from this definition, yet are we filled with worldly wisdom with the different theories that follow, as to causation, etc.; among those we find, first, the lactic acid theory, in which the system is supposed to be surcharged with this pernicious acid, which, of course, must be neutralized with potash, soda, ammonia, etc.

Then we have the nervous theory, in which a chill of the peripheral parts of the body causes disturbance of the corresponding parts of the central nervous system, thereby causing pain and vaso-motor changes in the economy. While *other* careful observers lay the blame entirely to the chill, causing an accumulation and retention of lactic acid, thereby disturbing the central nervous system, which in turn reacts upon the joints, as indicated by the pain, swelling, etc. Others, again, claim that the chill disturbing the central nervous system disturbs nutrition, thereby generating lactic and other pernicious acids.

Then we have the infection theory, caused by the entrance of micrococci into the animal economy, causing endo-carditis, etc.; and the germ theory, in which the disease is due to the presence in the blood of a vegetable organism of definite character; and lastly I will mention the malarial theory, in which the blood becomes poisoned by miasm from without.

Enough has already been said to convince us that the true pathology is still shrouded in mystery, and we only know that whether the pernicious germ has been developed within the system or introduced from without, we have got an exceedingly stubborn and painful customer to contend with—one that will be very likely to exhaust our patients' patience, if it does not our own. If there is a "doubting Thomas" present, let him glance over the many pages of our text-books devoted to the subject of treatment, and carefully note the innumerable number of remedies employed, and be convinced that we are still in the dark as to etiology, and that the treat-

ment is still almost wholly empirical. While this may be truthfully said of the old school, can we, as followers of Hahnemann, show a more excellent way?

Our literature may not be so voluminous, but our field of therapeutics is far more extensive—perhaps it does not include the whole materia medica, but a large proportion of our well-tried remedies are recommended, and indications given for their use.

Lilienthal mentions nearly or quite one hundred, together with symptoms whereby each individual remedy is indicated. Let us look at a severe case of inflammatory rheumatism in which nearly every muscle and articulation is implicated—of course pain is the prominent feature—(with the patient). Every movement is accompanied with a scream, while the agonized countenance is well calculated to tempt the humane physician to relieve at once the intense suffering by a hypodermic injection. We find, upon examination, temperature somewhat above normal, pulse rapid, respiration hurried, tongue heavily coated, urine loaded with urates and generally scanty, bowels inactive, perspiration usually profuse and exhaustive, at times the body cold and clammy.

Now, let me ask, can we find in our materia medica a complete picture of such a case—a remedy which we can with confidence exhibit, either attenuated or in crude form, and quietly sit down to await results, feeling reasonably certain that results *will* be favorable to our patient—even with the knowledge that *untrammeled nature* very often and unexpectedly tides us over seemingly impassable breakers?

We know that a large proportion of the diseases we have to contend with are self-limited, and fortunately this is one of the diseases in which six weeks of pleasant weather often does far more for the unfortunate sufferer than quarts of nauseous drugs, or pounds of pills and capsules.

Now I hardly expected to say anything new, or startling, or even

interesting, for it is a matter of almost daily occurrence with each of us to meet and relieve many of the symptoms of this disease, upon their first appearance, with our dilutions of aconite, bry., dulc., cimicifuga, rhus, etc., and congratulate ourselves that we have saved a goodly amount of suffering by our simple efforts ; but when we are brought face to face with an old, stubborn case, one which has a firm grip, and with good staying qualities, can we expect this one to vamose the ranch without strong resistance ? While I am willing to admit my own inability to cope successfully with the disease, confining myself strictly to homœopathic weapons, still I am confident that our materia medica contains the specific to enable us successfully to combat each individual symptom, as it presents itself ; and it only requires strict search and a close study of one's case to bring about the desired result. But how often do we fail, and in desperation try in succession the different specifics, which are usually some salycilate compound, crowding the stomach to its fullest capacity, or quietly stand aside and allow another to do it for us.

COMPOUND FRACTURE OF SKULL.*

By J. D. Zwetsch, M.D., Chief Surgeon B. & S. W. R. R., Gowanda, N.Y.

September 24, 1887, Mr. A. S., aged 25, while on a spree, and walking the railroad track, was overtaken by a freight train. Just what happened nobody knows. His story is that he tried to get on the car in front of the caboose, but failed, and in falling his head struck the step of the caboose ; he also had an impression that he was under the wheels, but this, of course, was impossible. That he was dragged some distance is proved by his clothes, which were

* Read before the Western N. Y. Homœopathic Medical Society.

torn to shreds, and the whole right side of his body, which was terribly bruised and lacerated.

My impression is that he got on the cars at Gowanda, and while the train was turning a sharp curve he fell, and struck on his head, and lay unconscious in the cold from midnight to 6:30 A.M.

When discovered he was brought to the depot, where I examined him. I found the patient in a comatose state, pupils dilated, breathing slow and heavy, pulse feeble and extremities cold. There were three scalp wounds, two of minor importance, but the other, which was three inches in length, was on the vertex and a little to the right of the middle of the skull.

On examining this wound I found a depression of the right parietal bone, about 1½ inches in width, and about ¾ of an inch in depth. The patient was at once removed to his house, where he was laid on a table, and hot applications applied. As an immediate operation was necessary, the skull was shaved and the scalp wound enlarged; when the scalp was retracted the skull was found broken in several pieces; I tried to separate these with a scalpel, but found them so tightly wedged together that it was impossible; so the only thing remaining to do was to trephine.

The bit was put into the solid bone, the trephine extending over the fracture; after removing the button five pieces were taken out; then inserting the elevator, raised the depressed bone from the brain. It was then found that a portion of the inner table had been broken off, and had cut through the membranes into the brain substance, which was bruised and torn. That portion of the brain which was injured was removed, the wound cleansed with a carbolic acid and water solution (1 : 40) and the pia-mater and dura-mater replaced. The patient then began to breathe easier, and while the scalp was being sewed up surprised us by asking, "What in —— we were doing." After the wound was dressed he was removed to his bed, and cloths wrung out in ice-water and calendula applied; these were

changed every ten minutes, and he was given arnica and aconite internally. That night the temperature was 102°, pulse 120, patient restless. He was still under the influence of liquor, and hard to manage, so I gave him a ¼ gr. hypodermic injection of morphine, after which he rested quite well. In the morning the temperature was 102½° ; the same treatment was continued. At 3:30 P.M. the temperature was 102°. At midnight 101¾°. The next day temperature 101°. At this time the patient was restless, his face flushed, and he complained of headache ; gave him belladonna and arnica. His stomach was so sour that he could not take nourishment, so gave nux vomica also.

The next day found temperature 99°, pulse 100 ; stomach in good condition ; he had taken one quart of milk in twenty-four hours, said that he felt quite well ; still gave him nux vomica and arnica.

The wound began to heal, and he did nicely for three days. Then he complained of his head, pain at the base and down the neck. Temperature 99, pulse 96°. Examining the wound, which had healed, found the scalp puffed, with evidences of pus beneath it. The wound was opened, and about two tablespoonfuls of matter discharged. Three hours after he said his head was feeling quite well. He began taking a goodly quantity of nourishment, and appeared to be doing well, with the exception of his bowels, which were very constipated. Several enemas were given, but the bowels would not move. I then gave him compound licorice powder, and that night two tablespoonfuls of castor oil. After five or six hours he had a good movement of the bowels.

The patient then continued to improve for several days, when he was found to be suffering from the same pain in the head, and the wound in the same condition as before ; on opening the wound about one tablespoonful of pus exuded ; this had no odor. The wound healed each time within twenty-four hours after being opened, which gave him immediate relief.

I continued all the way through with arnica and nux vomica, and kept the iced applications on for three weeks. The patient seemed then to be in perfect health, his wound was healed, his head felt all right, and he began to sit up. In one week more he began to walk out, and in two months had fully recovered his health and had gone to work at his trade. He has since had no trouble whatever, enjoying perfect health, and has taken no stimulants since the accident (says he has gotten through).

The bruises on the hip and side sloughed and troubled him considerably during the time he was confined to his bed.

Book Notices.

"Books are the Glasse of Counsell to dress ourselves by. They are Life's best Business: Vocation to them hath more emolument coming in than all the other busie terms of Life."—*A 16th Century writer.*

ATLAS OF VENEREAL AND SKIN DISEASES. By PRINCE A. MORROW, A.M., M.D. New York: Wm. Wood & Co., 1888.

Fasciculus VIII. has appeared with the following illustrations: Seborrhœa, Comedo, Milium, Sudamina, Typhus, Typhoid, Variola, Varicella, Rubeola, Rubella, Scarlatina and Erysipelas.

These plates are without exception the finest illustrations of the subjects mentioned which we have ever seen. More can be learned of various eruptions of fevers by a glance at these plates than by hours of reading.

The original text accompanying them is all that could be desired in a modern work on diseases of the skin. The treatment of each condition is discussed in a thoroughly scientific manner. Dr. Morrow, evidently believing in the maxim "let well enough alone," allows the self-limiting exanthemate to run their courses without medication, excepting such symptomatic treatment as may suggest itself.

The time has arrived when progressive men are giving up the ancient customs of over-medication in this class of affections, and aiding nature to combat the infection, instead of hampering her with the extra duty of excessive drug elimination.

Selections.

— **Herpes Zoster (Neuralgic Pains).**—In zoster the neuralgic pains are often piteously complained of, even after the eruption has disappeared. These distressing pains are worse in elderly people. Dr. Meredith (*Birm. Med. Review*) says: "Painting the affected parts with oleum menthæ pip. nearly always affords speedy relief. I have painted the oil over the eruption when it was out in a fresh, florid condition, and that with great relief to the patient.—*Med. Reg.*

— **Personal Health-Rules in Time of Cholera.**—Since the cholera germ gets into the stomach through the mouth, and from the stomach into the intestines, we should take care:

1. To take only cooked food and drink. This is the most important rule. Even the washing, rinsing, and bathing water should be free from germs, and the water from the wells should never be used, but only that from the city pipes.

2. To keep the body clean, and especially the hands, by frequent washing, especially before meals, and this should be done with disinfecting solutions, such as a 5 per cent. solution of carbolic acid (or a one-third per cent. solution of sublimate), and of this, in time of cholera, at least a quart should be used for washing the hands.

3. To live judiciously and carefully in time of cholera, and

(*a*) Not run away!

(*b*) Not to harbor people from cholera places.

(*c*) Not to visit a house in which there is cholera.

(*d*) Still less eat or drink anything in such a house.

(*e*) Especially, to take nothing, food, linen, laundry, playthings, or anything else, from a house in which there is cholera.

(*f*) To avoid in every way any thing that may disturb digestion; therefore:

Avoid taking cold, and sudden cooling off after being heated.

Do not sit up late at night with friends (drinking cold beer, for example).

Do not wear clothing that is very thin, and do not take off underclothing suddenly.

On no account bathe in running water. Water-courses often bear the germs of cholera.

Avoid collections of people, fairs, festivals, etc., of every kind.

4. All kinds of food are to be avoided that may cause catarrh of the stomach and intestines; so also, over-eating and over-drinking are to be avoided.

Every one should take the greatest precaution with regard to what comes into the house.

What may one eat and drink? What is forbidden? What is allowed?

FORBIDDEN!	ALLOWED.
Unboiled water!	Boiled water, with cognac, arrac, or red wine.
Raw milk and raw cream, and sour milk and whipped cream!	Good soda or seltzer-water, and natural mineral waters.
Butter and buttermilk!	Red wine.
Freshly baked bread!	Good lager beer.
All cold soups.	Coffee, tea, and cocoa.
Raw meat.	Baked bread must be heated for at least half an hour in the house before it is used!
Cold, cut meat that has stood for a long time.	All hot, well-cooked soups.

Salads of every kind.	All hot (boiled, stewed, roast) meats.
Mayonnaise and crêmes.	All cooked vegetables (potatoes, rice, maccaroni, asparagus, green peas, cauliflower, etc.)
Raw fruit and unfermented fruit-juices.	
Cheese.	Freshly cooked, warm compotes.
Cookies.	Eggs, and food made of eggs.
Ice.	Puddings.

5. Every irregularity of the body should be most strictly guarded against in time of cholera. Apparently slight diarrhœa should not be neglected, but a physician should be consulted immediately.—*Deutsche Medicinische Wochenscrift*, December 22, 1887.—*Med. Reg.*

Gravity as an Expectorant.—In cases of pneumonia where there is great embarrassment of breathing from accumulation of secretion in the bronchial tubes, great benefit may often be derived by inverting the patient and having him cough violently while in this position. It is easily accomplished by a strong assistant standing on the patient's bed, seizing the sick man's ankles, turning him with his face downward, and then lifting his feet four or five feet above the level of the mattress. If the patient, with his face over the edge of the bed and his legs thus held aloft, will cough vigorously two or three times, he will get rid of much expectoration that exhaustive efforts at coughing failed to dislodge when not thus aided by gravity. Life has been saved by repeated performances of this maneuver in pneumonia, accompanied with great cyanosis due to inundation of the bronchial tubes with mucus secretion. It of course, will have no effect on the exudate in the vesicles. Gravity is of value, in a similar way, in emptying the lungs of mucus during etherization.—*Polyclinic.*

The Past Year's Work on Physiology and Histology Having a Pathological or Clinical Bearing.—By Dr. H. McCallum, London.—Let us consider the subjects under the following heads :

1. *Respiratory Physiology.*—In this field, two facts can be con-

sidered worthy of our attention, *i. e.*, certain experiments on the pleura and Von Fleische's theory of heart-beat aiding the oxidation of the blood. A certain London physician (New York *Medical Record*), in experimenting on a large number of living dogs by opening the pleural cavity, found that collapse of the corresponding lung occurred in a very small percentage of cases. But if the dog were dead for any length of time before the operation, the corresponding lung invariably collapsed. He offers the following explanation that the pleural secretion has the power of keeping the pleural surfaces in apposition during life. Our former teacher in physiology has done much to retard the surgical treatment of the disease of the pleuræ, by warning the student and surgeon that opening this cavity would be followed by collapse of the lung.

With regard to the heart-beat aiding the oxidation of the blood, Professor Von Fleische, of Vienna, has lately advanced the theory that the jar given by the heart to the blood is an important factor in freeing the latter of carbon dioxide. He bases this theory on the law of physics. That a fluid holding a gas in solution, or weak chemical combination having suction applied to its surface, will very readily give off its gas if it be subjected to a smart blow. This would lead one to believe that blows to the chest in a feeble heart, would aid in the elimination of carbonic dioxide.

2. *Cardiac Physiology.*—Much work has been done in America by Mills, of Montreal, and Martin of Baltimore, in this department Mills' paper, read before the Canada Medical Association, on a plea for a better cardiac pathology, did not receive the credit it deserved. Da Costa's recent discovery in pathological anatomy of a nervous origin to the heart complications in Bright's disease was well foretold by Mills in this paper. Prof. H. Newell Martin, of Baltimore has demonstrated by carefully conducted experiments on the coronary arteries of the heart, that they fill by blood-pressure alone, and their pulsation is simultaneous with that of the carotid. It must

follow, therefore, that in diseases of the aortic valves, whilst good blood-pressure is being maintained, there can be no degenerative changes in the heart muscle unless the coronary arteries are themselves affected.

Gaskell (*Jour. Physio.* vol. vii., p. 451) makes some interesting investigations into the electrical changes of a quiescent cardiac muscle. He maintains that all tissues are supplied by two sorts of nerves, which he named anabolic and catabolic. The function of the first is inhibition, of the second contraction. These ideas he attempts to confirm by vagus stimulation. Stimulation of the vagus in the neck of an animal provokes a positive variation in the muscle of the auricle; while contraction of the same muscle is accompanied by negative (electrical) variation. By using a small dose of atropine in a partly detached portion of auricle (heart of a tortoise), paralyzing the inhibitory action, and operating during repose, the positive variation was prevented when the nerve was stimulated. By the anabolic process, Gaskell means that the muscle fiber is undergoing nutrition, and that while so doing it is incapable of work. Inhibition means, therefore, storage of nutrition in the muscle fiber, while contraction or catabolism breaks down the products of nutrition. Inhibition of the heart being a nutritive process, would not frequent electrical stimulation of the vagus be proper treatment for degenerative changes in the heart muscle?

3. *Digestion.*—Bacteria, in relation to digestion, have been receiving a goodly share of attention. Pasteur published, in August last, his researches (*L'Union Médicale*, Aug. 1887) on seventeen kinds of bacteria (found in the mouth), on articles of diet. Seven dissolved albumin, ten fibrin, six casein, and seven partly converted sugar into alcohol. Pasteur's conclusions were that many microorganisms were useful in digestion. But these conclusions stop short of the truth. True enough, bacteria convert proteids into soluble material, but this material will not only fail to nourish, but in many

cases will act as an irritant poison to the tissues. These toxic products of mycology are now known by the name of ptomaines. Since Pasteur found and cultivated six of these bacteria from the fecal matter, there can be little doubt that ptomaines are generated in a healthy intestinal canal, though more freely in catarrhal condition. How, then, is a toxic condition prevented in a normal body? Roger, of Paris (*Gazette des Hopitaux*, 1887), has proved that ptomaines and medical alkaloids are destroyed to a great extent in the liver; so much so that the latter are twice as potent given subcutaneously as by the portal vein. Rogers brought forward facts to prove it was the glycogen which exercises this protective function. The liver is not the only organ said to possess antitoxic function. McNum (*Brit. Med. Jour.*, Jan. 1888) works up a claim for the suprarenal capsules. German physiologists have been advancing a similar claim for the thyroid gland.

Lauder Brunton (disorders of digestion) has a peculiar explanation for the bitterness of bile (which he asserts is not always bitter), *i. e.*, it is bitter by virtue of the ptomaines it contains (all cadaveric alkaloids being bitter). He goes further, and asserts that all symptoms of jaundice are due to the ptomaines in the absorbed bile. This, if true, and there is good reason to believe it so, would throw light on many a clinical feature in liver disorders.

Another matter of clinical interest is Lagendorff's studies on sugar formation in the liver (*Archiv. für Physiologie*, 1886). It is well known that strychnine and curare produce, when administered to animals, artificial diabetes. Lagendorff found this to be the action of these therapeutic reagents on a nervous centre. For when the spinal cord was destroyed about the fourth dorsal vertebra in frogs these drugs fail to produce diabetes. If this region were intact, but the other parts of the nervous system destroyed, strychnine operated in producing diabetes. This points to a nerve centre which calls the liver cells into activity or produces vaso-dilation of the liver

capillaries. This is not all ; for the production of diabetes by strychnine the presence of the liver is necessary, while curare will act without its presence, and the amount of sugar excreted is as great when the liver is removed as when it is present.

Before leaving the subject of digestion, I would like to draw attention to Bunge's views on the assimilation of iron (*Zeitschreift für Phys. Chemie*, 1885). He found an albuminate of iron in the yolk of eggs, milk, etc., which was very stable, only strong chemical agents setting the iron free. Sulphuretted hydrogen and sulphide of ammonia separate the iron as an oxide in a couple of hours at body heat. He named this albumin Hæmatogin, believing that it gives rise to hæmoglobin of the blood. Working on this line, Bunge assumes that in anæmia this albumin is decomposed—the iron being converted into an inorganic compound which cannot as such be assimilated by the system. Putrescent changes in the food stuffs, in catarrhal conditions, effect this decomposition by generating sulphuretted hydrogen, etc. Bunge considers that iron administered in anæmia is not absorbed and assimilated, but combines with sulph. hydrogen, etc., etc., and so protects hæmatogin of the food from decomposition. He finds a proof in the good effect of intestinal antiseptics in anæmia.

In regard to the occurrence of iron in the body, Zalewski's experiments are of importance (*Zeitschreift für Phys. Chemie*, 1887). He isolated the combinations of iron occuring in the liver, and found that the combinations could be put under two classes: one, the organic, which occurs in very small quantities in the liver cells themselves, and easily detectable ; the other in which the iron is held in very strong combination, and needs powerful reagents to separate it. The later compounds were obtained from the nucleus, and presented all the characters of the nuclein class of compounds. These experiments of Zalewski raise the question whether iron is not present in the nucleus of every living cell. Its presence in the nucleus, and its combinations with nuclein, which has been so well termed the

"ground substance of life," points strongly to the view that iron is absolutely essential to the life processes of the cells. The old view was, that iron entered into combination with hæmoglobin only the economy. At the present time researches show that hæmoglobin is a degradation product of a constituent of the nucleus holding iron in combination. The tendency of research has been to show that iron does not enter the body in the form of ordinary salts, but the combination with such complex proteids as nuclein, and that only vegetatable protoplasm is capable of effecting a combination between albumin and iron.

4. *Blood.*—Gaglio (*Arch. für Anat. und Phys.*, 1886) established the occurrence of lactic acid in the blood of normal rabbits, to the extent of .05 per cent. (in dogs .08 per cent.). Berlinerblau (*Arch. für Experim. Pathologie*, 1887), also finds that lactic acid is normally present in human blood. We have yet to discover its relation to rheumatism and rachitis. In this field of physiology there has been no better worker than Prof. Osler. His views that the white blood corpuscles do not develope into red, and that the function of the blood plaques of Osler is the generation of the fibrin ferment, are now generally accepted by physiologists.

5. *Urine.*—Posner (*Arch. für Anat. und Physiologie*) maintains that albumins, more especially peptones, are present in the urine of every individual; but the amount is so small that their presence can only be demonstrated after concentrating the urine by evaporation.

6. *Histology.*—Great improvements have been made in the methods and reagents in staining, hardening, and fixing tissues. Fleming and Strassberger have done an immense amount of work on the cell, but it was left for Carnoy to complete these studies. He makes four divisions of cell protoplasm: (1) the granules or chromatine bodies, (2) connecting rods between these chromatine bodies in the nucleus he named caryoplasma, (3) these connections without

the nucleus he named cytoplasma, (4) the fluid in the cell he named enchylema. He rightly asserts that the chromatine bodies are the seat of life. They are diminished after secretion and exhaustion and absent in slow death of the cell, as may be seen in cell death from amyloid, colloid, or mucoid degeneration. In the light of this histology, I think there can be no doubt that amyloid material is the enchylema or lifeless fluid, plasma holding ptomaine in weak chemical combination or solution, the latter giving the diagnostic color with certain reagents.

One more point. When I have referred to the work done on the nerve terminations, I have done (I have not touched on the late physiology of the nervous system). Pfluger, of Germany, demonstrated the nerves entering into the cells of the parotid gland. McCallum, of Toronto University, demonstrated the nerve terminations in the epidermis and liver. In each of these he found the ultimate endings were in the network of the cell or nucleus.

The abnormal relation of the cell to the nervous system, I feel sure will yet be the pathology of carcinoma.—*Med. Age.*

Treatment of Dog Bites.—Dr. Williams, of Liverpool, says: Among some people the wounds caused by the bite of a dog are washed with hot water, and salt is then rubbed into the wound. Others wash the wound with hot vinegar only. Either plan is better than the barbarous custom of applying nitrate of silver. The principal object is to thoroughly disinfect the wound, and any disinfectant which will do this, and cause free bleeding, will answer the purpose. Dr. W. prefers sulphurous acid, which does all this, and the wounds heal well after; but any well-known substance, such as solution of chloride of lime or zinc, might answer the purpose, if the absurd practice of cauterizing the wound with nitrate of silver were discontinued.

The First Symptoms of Hereditary Syphilis.—Our statistics show that among 1000 cases of hereditary syphilis the different morbid symptoms are distributed as follows :

	Per cent.
Papulæ cutanæ et tuberculæ mucosæ sive papulæ humidæ	74
Rhagades labiorum, anguli oris et ani.	70
Rhinitis	58
Ulcera palati duri	52
Maculæ (et roseolæ)	45
Lymphadenitis chronica	20
Ulcera linguæ (glossitis ulcerosa)	27
Pemphigus (syphilis bullosa)	25
Onychiæ (paronychiæ)	23
Laryngitis	17
Pseudo-paralysis extremitatum	7
Ulcera cutanea	4
Gingivitis ulcerosa	4

In the great majority of cases, the children with hereditary syphilis were excessively emaciated and atrophically constituted and of less weight than normal ; many of them had not come to maturity. During my long professional career in the Moscow Foundling House, I have come to the conclusion that all children of incomplete gestation, and presenting debilitas congenita, are to be considered suspect of syphilis. It is a well-known fact that syphilis is by far the most frequent cause of abortions and premature birth in women, and for this reason physicians ought to be cautious with regard to any infant of premature birth—ought not to allow it to be nursed by a stranger, but rather induce the mother to nurse it herself, at least during the first two months, not only because the motherly milk is more proficient, but because, during this time, latent syphilis will be able to manifest itself by unmistakable symptoms.

In 1000 cases of hereditary syphilis which were observed by us, the normal weight of over 3200 g was found in a small minority of infants (63, or 6.3%) ; a comparatively small number of infants, in the condition of hereditary syphilitic infection, attained an average weight of 3100 g (only 106, or 19.6%) ; the large majority, 740, or

74%, weighing less then 3000 g, and of these, 348, or nearly 35%, had not come to maturity, with a weight of less than 2500 g.

The syphilic virus had impaired the nutrition of these infants during their fœtal life already. Attacking the tissues of the placenta, it diminished their nutritive and respiratory activity, thereby causing the very deficiency in the development of the organism. During the first weeks of life, all vital processes in such undeveloped organisms must needs take a slower course, the tissues and organs having to complete their final development. The physiological process of dropping the navel string is delayed considerably in these premature cases ; instead of being performed on the fourth or fifth day, as in normal infants, the navel is dropped in the second, sometimes even in the third week only, and predisposes the infant to umbilical inflammations and septic infections. Icterus, so frequent in neonatis that some will consider it a physiological phenomenon, is equally of much longer duration in infants of incomplete gestation, than in infants of normal gestation. The skin of infants of premature birth is undeveloped, very delicate and tender, and provided with a feebly developed epidermal tegument, by which it is very imperfectly protected from external influences ; the subcutaneous connecting tissue, as well as the perspiratory glands, are imperfectly developed. Physiological desquamation, which, in the normally developed infant, uses to begin in the second week of life and which is often so intense that entire lamellæ are scaled off at the same time (*desquamatio lamellosa*), in premature infants begins later, progresses at a much slower rate, and is incomparably less energetic, presenting mostly the simple form of a defurfuration. Considering the insignificant rotation of matter, the small oxidation, the feeble alimentation and vitality of the tissues, it is not a matter of surprise that the inherited disease should manifest itself in exterior symptoms much later in infants of incomplete gestation than in maturer ones. Premature and constitutional weakness are able considerably to pro-

tract the latent period of hereditary syphilis; but as soon as it breaks forth, it will adopt forms of much more severity in its further course. Among the syphiloids in such children, it is pemphigus which is most frequently observed and which not unfrequently extends its destructive action over extensive fields. On account of its later appearance in premature infants, hereditary syphilis becomes the more dangerous in foundling houses for nurses who suckle them themselves; moreover, pyæmia, to which such infants are eminently subject, may conceal hereditary syphilitic dyscrasy, the same being the case with malignant aphthæ, which are of equally frequent occurrence with them, and may embarrass considerably the diagnosis of syphilitic affections in the mucous membrane of the mouth.

We had no opportunity of observing infants of more than two months of age, they all being sent to the country at that time, to prevent overcrowding of the institution.—Abstract from *Jahrbuch für Kinderheilkunde und Physische Erziehung.—Pacific Record.*

New Cure for Consumption.—"Tuberculosis, if it be not too far advanced, is curable by this method." Such is the very satisfactory conclusion of Dr. Herard, the chairman of the committee which, fifteen months ago, was requested by the French Academy of Medicine to experiment with and report upon Dr. Garcin's theory that consumption may be completely arrested by the inhalation of the vapor of hydrofluoric acid. In the last fifteen months Dr. Herard and his colleagues have treated one hundred consumptive patients on Dr. Garcin's principles. They have entirely cured thirty-five; they have improved the condition of forty-one; the state of fourteen has not altered either for better or for worse, and ten have died. And some of the cases, be it noted, were very bad to begin with. This is exceedingly good news. Dr. Garcin was led to suspect that the vapor of hydrofluoric acid might be a specific for consumption

by his observations in glass manufactories. Glass-grinders are particularly prone to tuberculosis. Not so with glass-etchers, who work with the acid and whose rooms are always full of its vapor. It is the custom, too, in many French glass manufactories, for workmen who have injured their lungs by stooping over the grinding machinery to obtain permission to work for a time in the etching-room ; and it is found that the new atmosphere always benefits and often wholly cures them.—*Paris letter.—Pacific Record.*

Traumatic Complications of Pregnancy.—Reflex effects can be greatly diminished by the employment of anæsthetics, and that, too, without special danger to the fœtus. Ether is oftenest the chosen agent, but I am convinced that its effect on the child is more pernicious than that of chloroform. The latter anæsthetic seems peculiarly adapted to the pregnant woman, and by general consensus of opinion its dangers in midwifery practice are but a rumor from *nil.* Then, too,—and this is a consideration of some weight in this connection,—vomiting is less likely to result from its administration.

The best proplylactics are the antipsoric remedies, and, in my opinion, prominently *sulphur* and *calcarea carb.* Temperament and general physique are the best indications upon which to base our selection.

Sulphur.—For women of nervous temperament, inclined to be thin and narrow-chested, skin rough, sense of weakness through the pelvis ; flushes of heat and frequent faintness. Previous history of sparing flow at the month.

Calcarea carb.—Leucophlegmatic temperament, fair complexion, inclined to stoutness, clumsy ; feet cold and damp. Previous history of profuse flow.

There are many other remedies for use before and after traumatism, among which should be mentioned arnica, hypericum, *caulophyllum*, secale (neither of the last two lower than 3x), pulsatila,

arsenicum, gelsemium, china, etc. Moreover, I would not hestitate to appeal to *opium* for its soothing effects after severe traumatism, just as I would to chloroform or ether during the operation.—*S. Leavitt in Am. Hom.*

Treatment of Sprains.—By C. A. WEST, M.D.—Every doctor has been perplexed with the treatment of sprained ankles or wrists or knees. The treatment must often be prolonged, and the pain and swelling often remain for a long time, until the patient, who is most apt to be an active, restless, healthy business man, becomes no longer patient, or your patient, as he consults some other medical man, who may inform him that his great mistake was in not consulting him at first, as all valuable (?) measures have been neglected.

Liniments in these cases are of but little use. Relief from pain is the first essential, to be procured in a way which will further the process of cure. This may be done by stimulating the circulation of the part, thus preventing blood stasis and engorgement about the part. Immerse the injured joint in *hot* water, or hot salt and water, for from twelve to eighteen hours if necessary. As soon as the major portion of the swelling and the pain has abated, apply to the afflicted part a light plaster of paris or starch dressing, to insure immobility, and be assured that the cure in most cases will be very speedy and remarkably satisfactory. The writer has tried this in several cases, and he has yet to have a single unsatisfactory result. The only remedy necessary, if any is used, is arnica, diluted with five parts of water or sweet milk, applied for a few hours before the permanent dressing.—*Chicago Med. Times.*

—**What Cocaine to Use.**—"The medical profession has about settled its estimate of the therapeutical value of muriate of cocaine, but it is, unhappily, no easy matter to decide upon the most uniformly reliable source of supply. The editor of *Progress* has about con-

cluded Merck's was the only reliable product, when recently he was induced to make trial of that produced by Parke, Davis & Co. A fresh sample of ten grains was dissolved in five drachms of distilled water, to which was added one drop of liquid carbolic acid. One drop of this distilled into the eye of a man from whose cornea a foreign body was to be removed, produced complete anæsthesia in three minutes, so that incision of the inflamed cornea, and turning out of the piece of offending metal, was not felt by the patient. Twenty other similar experiments yielded similar results."

A Substitute for the Orthodox Pessary.—By W. GILL WYLIE, M.D., of New York, in *Med. Record.*—I think it is a mistake to regard simple displacement of the uterus as a disease. It is very frequently associated with serious disease, but, as a rule, if the disease is cured, the displacements are of little consequence.

Long ago I was convinced that the pessary was only a helping instrument; that if it relieved the patient, it simply relieved her, and that its use alone was not good practice. Some years ago Dr. Sims introduced glycerine as an agent to be used in the vagina, with the view of producing a watery discharge. He also found that if it was left there forty-eight hours it would very frequently undergo some kind of ferment or change resulting in a vaginitis, and do more harm than good. He also mixed with it alum, and found that alum increased the tendency to the watery discharge.

A number of years ago I took up the subject, but accomplished little until boro-glyceride was brought out.

A standard formula that I use with great success in my practice is, one ounce of boro-glyceride and enough pure glycerine to make a pint, and one ounce of sulphate of alum (if I want an astringent; if not, the acetate of aluminium).

Then I found, if I took cotton in a soft, fluffy bunch, tied it with a string, saturated it with the solution, and put it up against the

uterus, that, often, in six hours, that piece of cotton would be rolled into a ball which would rest against the urethra and set up an irritation. I saw then that this would not do, and it occurred to me to take the cotton and roll it up over a rubber tube; after it had been rolled to the size desired, I tied the end of it firmly with a string. That answered very well. Later I secured some borated cotton of Eimer & Amend, which comes in flat sheets. I found that by rolling this firmly into a roll about one inch in diameter and two inches long, and tying it with a good flax string at the end, I had cotton in such shape that, if it was thoroughly saturated and put into the vagina, it would retain the shape for four days. It would stay where it was put, and in four days it would be almost in the identical position. I also found that, for the first twenty-four hours after its introduction, there would come away a profuse watery discharge, from four to eight or nine ounces, in proportion to the congestion of the uterine vessels.

The method of introduction is as follows: Place the patient in Sims' position, then introduce Sims' speculum; after saturating the cotton thoroughly, pull back the perineum and push the cotton against the cervix, letting the cervix rest on the anterior part of the cotton. Hold the cotton in that position and remove the speculum. The anterior portion would then lie in the direction of the pubic bone.

It acts as a pessary, except with more certainty, because the perineum, springing up against the cotton, keeps it in place.

The action of the boro-glyceride is to prevent any kind of ferment or change. It has a good effect in catarrhal conditions, and it does not interfere at all with the action of the glyceride and alum in producing the watery discharge. I am satisfied with this as a means of keeping the uterus in place, and at the same time as tending to cure any uterine congestion. I leave it in the patient for twenty-four to seventy-two hours; then wash out the coagulated mixture, and on

the third or fourth day make a second application. If there is much of a dragging sensation, I tell the patient to wear it for two or three days.

The manner in which this acts as a curative agent, it seems to me, is perfectly plain. The watery discharge that comes from the glands of the mucous membrane, not only of the vagina but of the uterus itself, forces a rapid circulation through the pelvic vessels ; it acts in the manner of a very hot poultice, by getting up an active circulation through the tissues, thus bringing fresh and healthy blood into the tissues ; and in that way it helps to eliminate disease.

You can theorize about this as much as you please, but practically it is a very great success.

I can take a case of sub-involution of two or three months' standing, with the dragging sensation and more or less leucorrheal discharge, and in from three to six weeks I will reduce the uterus to its normal size, using nothing else but this cotton. It has enabled me to do almost entirely without pessaries. I use this treatment in cases where Dr. Emmet recommends hot water and iodine. It is very much quicker in its action than the latter method, and instead of the patient being kept in bed she is enabled to go about.

I often use bismuth on these pledgets, as it is a good antiseptic ; also other substances, such as iodoform, balsam of Peru, etc.—*Columbus Med. Jour.*

The Treatment of Denuded Surfaces by Grafts of Chicken Skin.—*Ed. Bos. Med. and Surg. Jour.*, May 31 : The latest novelty in the grafting line is the treatment of large solutions of continuity in the human subject by bits of skin transplanted from the chicken. Redard communicates to the Société de Biologie an article commendatory of this new method. In one of his cases, almost the whole scalp in a child was destroyed by a burn. Grafts of chicken skin were practiced for four months with gratifying success.

According to this writer, the skin, with a little cellular tissue, is taken from under the wings of young chickens. Little transparent bits, not exceeding from half a centimetre to a centimetre, are excised. These readily adhere to the part on which they are grafted, and are simply covered with iodoform gauze and charpie.

Redard regards chicken skin as the ideal grafting material, being supple, fine and vascular. It spreads well and evenly over surfaces, and adheres without being absorbed, making epidermic islets which, in developing and spreading, form new tissues which are supple (unlike ordinary cicatricial tissue) and likely to be permanent.

Readers of the *Journal* will recall other attempts to lay the animal kingdom under contribution, notably the use of frog skin, as mentioned in the last surgical report.—*Epitome.*

—**Cure for Hiccough.**—Close the external auditory canals with the fingers, exerting a certain degree of pressure; at this time the patient is to take a few sips of water, the cup being held to his lips by another person. The effect is said to be immediate.—*N. Y. Med. Jour.*

News and Miscellany.

—Dr. H. I. Ostrom, of New York, has just returned from "a trip abroad." We have the doctor's word that we shall have several articles from his scholarly pen to place before the readers of THE INVESTIGATOR during the coming winter.

—East Aurora, Erie Co., N.Y., a flourishing village of 1500 to 2000 people, offers a good opening to a homœopathic physician.

—The hypodermic injection of permanganate of potash, two grains to the drachm of water, has been discovered by a Brazilian physician, Dr. Leaoudor, to be an antidote for snake poison. His govern-

ment has presented him with $15,000 as a bonus for his discovery. Dr. Gaston, of Atlanta, Ga., has used it in this country with success.

—DIGESTIVE DISORDERS OF CHILDREN.—The value oflisterine in those digestive disorders of childhood, which lead to what is commonly called cholera infantum, can scarcely be overrated. A teaspoonful of listerine administered per orem has been known to dissipate the most alarming symptoms, cutting short the attack and apparently saving life. A good way is to begin something like this: Calomel and chlorate of potash each one grain, to be rubbed well together, and to be divided into ten powders; one to be given every five minutes until vomiting ceases, and the nature of the stools have been changed. Then commence and give teaspoonful doses of listerine every four hours until convalescence.—*Progress.*

FOR SALE AND EXCHANGE.

For Sale.—A $6000 homœopathic practice in a town of 12,000, State of Georgia. Must leave on account of wife's health. A good opening and cheap. Address J. A. TIGNER, M.D., Rome, Ga.

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